In the Claims:

Claims 1-14 (previously cancelled).

15. (currently amended) A method of controlling packet delay through a packet buffer of a digitized packet-based transmission network, said packet buffer being operative to store packets received from said network and to controllably read out packets therefrom for application to a digitized packet signal processor, said method comprising the steps of:

(a) establishing a nominal value of buffer delay through said packet buffer for packets received from said network; and

(b) in response to an increase in delay in receipt of packets from said network, increasing buffer delay from said nominal value to an increased buffer delay and maintaining said increased buffer delay value in the absence of a further increase in delay in receipt of packets from said network, and thereafter iteratively further increasing said buffer delay, as necessary, for any further increase in delay in receipt of packets from said network, so that the value of buffer delay is adjusted as necessary to a delay value sufficient to accommodate the maximum encountered transport delay through said network.

16. (previously added) The method according to claim 15, wherein step (b) further comprises, in response to increase in delay in receipt of packets from said network exceeding the maximum available delay through said packet buffer, discarding

the oldest packet stored in said packet buffer.

17. (previously added) The method according to claim 15, wherein step (b) further comprises, in response to said packet buffer becoming depleted of packets, selectively supplying no packet or reapplying the most recently received packet in said packet buffer to said digitized packet signal processor.

18. (previously added) The method according to claim 15, wherein step (a) includes establishing a minimum number of packets that must be present in said buffer before a packet therein is controllably read out for application to said digitized packet signal processor.

19. (previously added) The method according to claim 18, wherein step (a) further includes, prior to handling a call, presetting a buffer size counter to a prescribed reset value, contents of said buffer size counter being representative of how may packets are stored in said packet buffer, and generating a buffer flag associated with whether a minimum number of frames has been received.

20. (previously added) The method according to claim 19, wherein step (a) further comprises monitoring a communication channel of said network for receipt of an incoming voice packet within a respective packet interval and, in response to detecting

an incoming voice packet, controllably modifying the contents of said buffer size counter, and storing said incoming voice packet in said packet buffer.

21. (previously added) The method according to claim 20, wherein step (a) further includes changing said buffer flag from its reset value, in response to said buffer containing said number of packets that must be present before a packet is controllably read out therefrom, and controllably reading out a packet from said packet buffer for application to said digitized packet signal processor.

22. (previously added) The method according to claim 20, wherein step (a) further includes establishing the maximum number of packets that can be stored in said buffer and, in response to an increase in delay in receipt of late arriving packets from said network for application to said buffer being such as to cause the contents of said buffer to exceed said maximum number, discarding the oldest packet stored in said buffer.

23. (previously added) A method of optimizing throughput delay in the course of storage into and read-out of packets from a packet buffer of a digitized packet-based transmission network, said packet buffer being operative to store packets received from said network and controllably read out packets therefrom for application to a digitized packet signal processor, said method

comprising the steps of:

(a) storing said packets into said buffer, as packets are successively received from said network, until a network transmission delay causes an interruption in receipt of packets from said network, so as to realize a network throughput delay corresponding to the number of packets stored in said buffer at the occurrence of said interruption in receipt of packets from said network;

(b) in response to said interruption in receipt of packets from said network in step (a), sequentially reading out packets stored in said buffer for application to said digitized packet signal processor;

(c) in response to receipt of further packets from said network subsequent to said interruption in step (a), interrupting sequentially reading out of packets from said buffer in step (b), and storing said further packets into said buffer as said further packets are successively received from said network, until a network transmission delay causes an interruption in receipt of said further packets from said network, increasing said buffer throughput delay to an increased network transmission delay corresponding to the total number of packets stored in said buffer; and

(d) in response to said interruption in receipt of said further packets from said network in step (c), sequentially reading out packets stored in said buffer for application to said digitized packet signal processor.

24. (previously added) The method according to claim 23, wherein oldest packet stored in said packet buffer is discarded in response to an increase in delay in receipt of packets from said network exceeding the maximum available delay through said packet buffer.

25. (previously added) The method according to claim 23, wherein step (c) further comprises, in response to said packet buffer becoming depleted of packets, selectively supplying no packet or reapplying the most recently received packet in said packet buffer to said digitized packet signal processor.

26. (previously added) The method according to claim 23, wherein step (a) includes establishing a minimum number of packets that must be present in said buffer before a packet therein is controllably read out for application to said digitized packet signal processor.

27. (previously added) The method according to claim 26, wherein step (a) further includes, prior to handling a call, presetting a buffer size counter to a prescribed reset value, contents of said buffer size counter being representative of how may packets are stored in said packet buffer, and generating a buffer flag associated with whether a minimum number of frames has been received.

28. (previously added) The method according to claim 27, wherein step (a) further comprises monitoring a communication channel of said network for receipt of an incoming voice packet within a respective packet interval and, in response to detecting an incoming voice packet, controllably modifying the contents of said buffer size counter, and storing said incoming voice packet in said packet buffer.

29. (previously added) The method according to claim 28, wherein step (a) further includes changing said buffer flag from its reset value, in response to said buffer containing said number of packets that must be present before a packet is controllably read out therefrom, and controllably reading out a packet from said packet buffer for application to said digitized packet signal processor.

30. (previously added) The method according to claim 29, wherein step (a) further includes establishing the maximum number of packets that can be stored in said buffer and, in response to an increase in delay in receipt of late arriving packets from said network for application to said buffer being such as to cause the contents of said buffer to exceed said maximum number, discarding the oldest packet stored in said buffer.